CLAIMS

1. A method of treating a structure, characterized in that it consists:

- in producing an initial structure (11; 101; 201) comprising at least a main part and a secondary part, which have a mutual contact interface, and means formed from at least one region to be treated (20; 106; 206), which can vary in thickness approximately perpendicular to this interface due to the effect of a treatment of the material forming said region; and
- in applying this treatment to said region to be treated of said initial structure so as to produce a final structure (12; 102; 202) such that the variation in thickness of said region causes the formation of an internal space (25; 109; 209) extending between said parts over at least one zone of said interface and approximately parallel to this interface or on the inside of at least one of said parts, some distance from and approximately parallel to said interface.

2. The method as claimed in claim 1, characterized in that said means (20) formed from at least one region to be treated are integrated into said main part and/or into said secondary part.

3. A method for treating a structure, characterized in that it consists:

- in producing an initial structure (11) comprising at least a main part (13) and a secondary part (21), which have a mutual contact interface, and at least one of which parts has at least one region (20) to be treated, said region being adjacent or close to said interface and able to be reduced in thickness approximately perpendicular to this interface due to the effect of a treatment; and
- in applying this treatment to said region to be treated of said initial structure so as to produce a

final structure (12) such that the reduction in thickness of said region causes the formation of an internal space (25) extending between said parts over at least one zone located in said interface and approximately parallel to this interface or on the inside of at least one of said parts, some distance from and approximately parallel to said interface.

4. The method as claimed in claim 3, characterized in that it consists in producing an initial structure (11) comprising at least one complementary part (16, 18) having opposed faces (16a, 16b) that bear on said main and secondary parts, respectively, approximately parallel to said interface, said region (20) to be treated lying in the vicinity of this complementary part and said treatment producing a reduction in the thickness of this region to be treated.

5. The method as claimed in claim 4, characterized in that said complementary part (16, 18) comprises at least two spaced-apart portions, said region (20) to be treated lying between these two portions and said treatment producing a reduction in the thickness of this region to be treated.#5'

6. The method as claimed in any one of claims 3 to 5, characterized in that said region (20) to be treated results from an amorphizing ion implantation into at least one of said parts, causing the constituent material to swell, and in that said treatment consists in recrystallizing, preferably by epitaxial regrowth, at least part of the amorphized region so as to produce a reduction in its thickness.

7. The method as claimed in any one of claims 3 to 6, characterized in that one of said faces of said complementary part (16, 18) lies in the plane of said interface.

8. The method as claimed in any one of claims 3 to 7, characterized in that said complementary part comprises at least one pad (16) or wall (18).

9. A method for treating a structure, characterized in that it consists:

- in producing an initial structure (101; 201) comprising at least a main part (103; 203) and a secondary part (107; 207), which have a mutual contact interface (108; 208), and at least one complementary part (106; 206) having opposed faces (106a, 106b) that bear on said main and secondary parts, respectively, approximately parallel to said interface, and comprising at least one region to be treated that is capable of increasing in thickness approximately perpendicular to said interface due to the effect of a treatment; and

- in applying this treatment to said region (106; 206) to be treated of said initial structure so as to produce a final structure (102; 202) such that the increase in thickness of said region of said complementary part causes a displacement of said main and secondary parts relative to each other, at least in the vicinity of said complementary part, and causes the formation of an internal space (109; 209) extending between said main and secondary parts over at least one zone of said interface and approximately parallel to this interface or on the inside of at least one of said parts, some distance from and approximately parallel to said interface.

10. The method as claimed in claim 9, characterized in that said complementary part (106; 206) comprises at least two spaced-apart portions comprising at least one respective region to be treated that is capable of increasing in thickness approximately perpendicular to said interface due to the effect of a treatment, and in

that the application of this treatment to these regions causes a displacement of said main and secondary parts relative to each other, at least in the vicinity of said portions, and causes the formation of an internal space (109; 209) extending over at least one zone of said interface, at least between said spaced-apart portions, and approximately parallel to this interface or on the inside of at least one of said parts, some distance from and approximately parallel to said interface.

11. The method as claimed in either of claims 9 and 10, characterized in that one of said faces of said complementary part (106; 206) lies in the plane of said interface.

12. The method as claimed in any one of claims 9 to 11, characterized in that said complementary part (106; 206) comprises at least one pad or wall.

13. The method as claimed in any one of claims 9 to 12, characterized in that said treatment consists in producing gas bubbles in said region (106; 206) to be treated, so as to cause said increase in thickness of said complementary part.

14. The method as claimed in any one of the preceding claims, characterized in that said main and secondary parts comprise superposed layers with a flat interface, at least in the zone of said space to be formed, at least one of which layers comprises a semiconductor material.

15. The method as claimed in any one of the preceding claims, characterized in that said region to be treated contains at least one material capable of undergoing a heat treatment that causes its thickness to vary.

16. The method as claimed in any one of the preceding claims, characterized in that at least one of said parts includes a weakened zone (203a) in which said internal space (209) forms.

17. The method as claimed in claim 16, characterized in that said weakened zone is obtained by ion implantation.

18. The method as claimed in either of claims 16 and 17, characterized in that the adhesion of said layers to one another is greater than the strength of said weakened zone.

19. A structure comprising at least two superposed layers, at least one of which comprises a semiconductor material, characterized in that it has an internal space (25; 109; 209) that extends between said layers over at least one zone of their interface and approximately parallel to this interface or that extends on the inside of at least one of said layers over at least one zone lying some distance from and approximately parallel to said interface, and in that it includes means (20; 106; 206) constituting an integrated region having been varied in thickness approximately perpendicular to said interface due to the effect of a treatment of the constituent material in order to cause the formation of said internal space by displacement of the surface of at least one of said layers in said zone of said space or by rupture of the aforementioned layer in its aforementioned zone lying some distance from and approximately parallel to said interface.

20. The structure as claimed in claim 19, characterized in that said integrated region (20) is located in at least one of said layers and extends parallel to said space, this integrated region having

decreased in thickness.

21. The structure as claimed in either of claims 19 and 20, characterized in that it comprises at least one complementary part (16) having opposed faces that bear on one of said layers and on the other, respectively, approximately parallel to said interface, said space lying in the vicinity of this complementary part.

22. The structure as claimed in claim 21, characterized in that said complementary part comprises at least two spaced-apart portions, said space extending between these two portions.

23. The structure as claimed in claim 19, characterized in that it comprises at least one complementary part (106; 206) having opposed faces that bear on one of said layers and on the other, respectively, approximately parallel to said interface, and in that said integrated region is located in this complementary part, this integrated region having increased in thickness and said space lying in the vicinity of this complementary part.

24. The structure as claimed in claim 23, characterized in that said complementary part comprises at least two spaced-apart portions, said space extending between these two portions and in that said integrated region is located in these portions.

25. The structure as claimed in any one of claims 19 to 24, characterized in that it comprises at least one surface layer adjacent to or located in said interface, in particular a layer of carbon nanotubes.

26. The structure as claimed in any one of claims 19 to 24, characterized in that said zone (203a) lying some distance from and approximately parallel to said

interface is weakened.

27. The structure as claimed in any one of claims 19 to 25, characterized in that said complementary part (106; 206) comprises at least one pad or wall.